

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A method for processing movement data in synchronous video, the method comprising:

obtaining a first frame of digital data corresponding to a digital image;

generating a color-table for the first frame of the digital data, the color-table corresponding to at least one pixel color contained within the first frame;

mapping the first frame of digital data according to the color-table;

obtaining a preceding frame of digital data corresponding to the digital image;

generating a cumulative color difference between the first and the preceding frames of the digital data; and

updating a frame data if the cumulative difference is above a difference threshold, wherein the frame data is operable to regenerate the first frame of the digital data.

2. The method as recited in Claim 1, wherein the preceding frame of digital data is previously mapped with a color-table corresponding to at least one pixel color contained within the preceding frame.

3. The method as recited in Claim 1, wherein the first frame is a bitmap image, the method further comprising truncating at least one bit of the first frame bitmap prior to generating the color-table.

4. The method as recited in Claim 3, wherein truncating at least one bit of the first frame includes truncating the three least significant bits of the bitmap image.

5. The method as recited in Claim 1, wherein the color-table includes up to sixteen colors contained within the first frame.

6. The method as recited in Claim 1 further comprising encoding the first frame color mapping if the size of the resulting encoded color mapping is less than the size of the unencoded color mapping.

7. The method as recited in Claim 1, wherein mapping the first frame includes:

subdividing the first frame of the digital data into two or more pixel blocks; and

mapping a first pixel block according to the color table.

8. The method as recited in Claim 7 further comprising repeating the method for a second pixel block.

9. The method as recited in Claim 1, wherein generating a color-table includes randomly sampling individual pixels within the first frame of the digital data to obtain at least one color in the color table.

10. The method as recited in Claim 1, wherein generating a color-table includes retrieving a predefined color-table.

11. The method as recited in Claim 1 further comprising discarding the frame data if a size of the frame data is greater than a size threshold.

12. The method as recited in Claim 11, further comprising:
compressing the first frame of the digital data utilizing a low resolution compression process; and
adjusting the difference threshold.

13. A computer-readable medium having computer-executable instructions for performing the method recited in any one of Claims 1-12.

14. A computer system having a processor, a memory, and an operating environment, the computer system operable for performing the method recited in any one of Claims 1-12.

15. A method for processing movement data in synchronous video, the method comprising:

obtaining a first frame of digital data;

obtaining a second frame of digital data, where the second frame of digital data is representative of a time preceding the first frame of digital data;

comparing the cumulative color difference between the first and second frames of digital data;

mapping the cumulative color difference according to a pseudocolor scale;
and

displaying a resulting frame of digital data.

16. The method as recited in Claim 15, wherein comparing the cumulative color difference includes:

obtaining a first pixel block from the first frame of digital data;

obtaining a first pixel block from the second frame of digital data; and

comparing the cumulative color difference between the first pixel block from the first frame of digital data and the second frame of digital data.

17. The method as recited in Claim 16, wherein comparing the cumulative color difference between the pixel block data includes comparing the color difference for each pixel in the pixel block data.

18. The method as recited in Claim 16 further comprising:

obtaining additional pixel blocks from the first and second frames of digital data;

comparing the cumulative color difference for each additional pixel block;
and

repeating the comparison until no pixel blocks remain in the first and second frames of digital data.

19. The method as recited in Claim 15, wherein the first and second frames of digital data are compressed, the method further comprising uncompressing

the first and second frames of digital data prior to comparing the cumulative color difference between the first and second frames of digital data.

20. The method as recited in Claim 19, wherein the frames of digital data are compressed utilizing a high resolution routine.

21. The method as recited in Claim 15, wherein the pseudocolor is configured to map cumulative color differences below a movement threshold in a grayscale and cumulative color differences above the movement threshold in at least one distinct color.

22. The method as recited in Claim 21, wherein the pseudocolor is configured to map cumulative color differences above the movement threshold in several distinct colors, wherein each distinct color is representative of a range of cumulative color differences.

23. A computer-readable medium having computer-executable instructions for performing the method recited in any one of Claims 15-22.

24. A computer system having a processor, a memory and an operating environment, the computer system operable to perform the method recited in any one of Claims 15-22.

25. A computer-readable medium having computer-executable modules, the computer-readable medium comprising a synchronous video compression module operable to obtain a first and second frame of digital data and generate a compressed frame data, wherein the compressed frame data is configured to include any cumulative color difference below a compression threshold.

26. The computer-readable medium as recited in Claim 25, further comprising a synchronous video processing module operable to obtain a first and second frame of digital data and generate a processed frame data, wherein the

processed frame data is configured to map any cumulative color difference according to a pseudocolor scale.

27. In a computer system having a graphical user interface including a display and a user interface selection device, a method for processing movement data in synchronous video, the method comprising:

displaying a data frame size indicator indicative of a size of a data frame inputted to the computer system; and

displaying a movement threshold interface component operable to be manipulated by the user interface selection device to modify a movement threshold;

wherein a value of the movement threshold corresponds to the size of the data frame.

28. The computer-readable medium as recited in Claim 27 further comprising displaying a movement threshold indicator indicative of a current value of the movement threshold.

29. The computer-readable medium as recited in Claim 27, wherein the data frame size indicator includes a graphical data size indicator.

30. The computer-readable medium as recited in Claim 27, wherein the data frame size indicator includes a textual data size indicator.

31. The computer-readable medium as recited in Claim 27, wherein the data frame size indicator includes a combination graphical and textual size indicator.

32. The computer-readable medium as recited in Claim 27, wherein the movement threshold indicator is a graphical slide bar.

33. In a computer system having a graphical user interface including a display and a user interface selection device, a method for processing movement data in synchronous video, the method comprising displaying a frame of digital data, wherein the frame of digital data corresponds to the processing of a first and second

frame of raw video data such that the cumulative color difference is displayed according to a pseudocolor in the frame of digital data.

34. The method as recited in Claim 33, further comprising displaying a movement threshold interface component operable to be manipulated by the user interface selection device to modify a movement threshold, wherein the movement threshold is indicative of the cumulative color difference displayed on the first frame.

35. The method as recited in Claim 33, wherein the pseudocolor includes displaying all cumulative color differences below a movement threshold in a grayscale and cumulative color differences above a threshold in at least one distinct color.

36. The method as recited in Claim 35, wherein the pseudocolor scale includes displaying all cumulative color differences above the movement threshold in multiple distinct colors, wherein each distinct color is representative of a scale of cumulative color differences.

37. A method for processing movement data in synchronous video, the method comprising:

obtaining a first frame of digital data corresponding to a digital image;

subdividing the first frame of the digital data into two or more pixel blocks;

generating a color table for each pixel block in the first frame of the digital data, the color table corresponding to at least one color contained within each pixel block;

mapping each pixel within the pixel block according to the color table;

obtaining a preceding frame of digital data corresponding to the digital image;

generating a cumulative color difference between each pixel block in the first frame of data and a pixel block in the preceding frame of the digital data; and

updating a frame data if the cumulative color difference between each pixel block is above a different threshold, wherein the frame data is operable to regenerate the first frame of the digital data.

38. The method as recited in Claim 37, wherein the preceding frame of the digital data is mapped with a color table corresponding to at least one color contained within the preceding frame.

39. The method as recited in Claim 37, wherein the first digital frame is a bitmap image, the method further comprising truncating at least one bit of the first frame bitmap prior to generating the color table.

40. The method as recited in Claim 39, wherein truncating at least one bit of the first frame includes truncating three least significant bits of the bitmap image.

41. The method as recited in Claim 37, wherein the color table includes up to sixteen colors contained within each pixel block.

42. The method as recited in Claim 37, wherein generating a color table includes randomly sampling individual pixels within each pixel block of the digital data to obtain at least one color in the color table.

43. A computer-readable medium having computer-executable instructions for performing the method recited in any one of Claims 37-42.

44. a computer system having a processor, a memory, and an operating environment, the computer system operable to perform the method recited in any one of Claims 37-42.